

**REMARKS**

Applicants request the Examiner to reconsider the application as amended.

Claims 1 to 3, 5 to 7, 10, and 22 to 24 are pending in the application. Claims 9 and 11 were cancelled. Claim 22 was amended to correct dependency. New claim 24 is presented to place the subject matter of claim 9 into dependent form. Claim 1 was amended to specify that the bilobal filaments have a denier per filament (dpf) of less than about 2.9. Support for the amendment to claim 1 is found in the specification, *inter alia*, at page 14, line 8.

Applicants' undersigned representative thanks Examiners Salvatore and Morris for discussing the pending claims and cited references with her and Dr. Thomas Micka during a personal interview on October 7, 2004. During the interview, the Examiners suggested that Applicants consider claim amendments to clarify the focus of the claims to yarns with denier and dpf suited for wearing apparel.

**I. Rejection under 35 U.S.C. § 103(a) - Mills and Smith**

Applicant respectfully traverses the rejection of claims 1-3, 5-7 and 10 under 35 USC 103(a) as being unpatentable over Mills et al. (US 5,447,771) and Smith et al. (US 3,852,946). The Examiner asserts that Mills shows a yarn with fibers having a profiled cross-section having a dpf that overlaps Applicants' claimed range, and that Smith discloses yarns with total denier encompassing the total denier range claimed. Applicants respectfully traverse as to all pending claims.

Mills is directed to carpet fibers, preferably with total yarn denier from 1000 to 1200, and denier per filament from 6 to 12 (Col. 2, line 43). At Col. 5, lines 27 to 35, Mills discusses carpet yarns having total denier of at least 500 with a potentially broad range of 3 to 30 dpf. However, Mills teaches away from making S- or Z-shaped profiled fibers of finer dpf typically

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Serial No. 09/881,230

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used for wearing apparel, such as intended by the present Applicants. To further emphasize this distinction from Mills, Applicants have amended claim 1 to require profiled fibers with denier per filament of "less than about 2.9". Support for this amendment is found in the specification, *inter alia*, at page 14, line 8. Thus, Applicants' invention is to a yarn with a total denier and finer dpf most suitable for wearing apparel, wherein Mills is directed to total denier and coarser dpf more suited for carpet constructions. Neither the total denier nor the dpf of Mills overlaps with any of Applicants' claims.

Mills leads persons of skill in the art away from the smaller total denier and finer dpf of claim 1. The entirety of the Mills disclosure is to a carpet construction, as is clear from the title, from the denier range, from the dpf range, and from the working examples. At no point does Mills test any samples with dpf finer than 4.5, and the comparative example 5 that included the 4.5 dpf was deemed unsatisfactory for Mills' purpose.

Smith does not fill the gaps in the disclosure of Mills. Smith is expressly directed to "high denier" steam bulk yarns for commercial carpets (Col. 2, lines 3-4). Smith directs skilled persons to yarns with total denier from 1000 to 2000, or at least five times higher than Applicants' claimed range. Smith does not mention denier per filament, except at Col. 7, line 54, where the 50 filaments with total denier of 950 calculated to 19 dpf. Such coarser fibers used in Smith would not be suitable for wearing apparel. Smith is not pointing skilled persons to fine denier, fine dpf yarns with S- or Z-shaped bilobal cross-sections for fabrics. The Examiner picks and chooses language from Smith concerning possible broadening ranges for denier without taking into account the totality of Smith's disclosure away from using finer denier and finer dpf.

Persons of skill would not be disposed to combine Mills and Smith to create yarns with fibers of profiled cross-sections with the total denier and finer dpf now required in claim 1, in

combination with all of the other limitations present in claim 1. Polyamides, like nylon 6,6, are difficult to process into fibers with profiled cross-sectional shapes, such as the S- or Z-shapes required by claim 1. Due to their non-Newtonian fluid motion, these materials seek to remain in regular cross-sectional shapes balanced about the filament axis, such as circular. For finer dpf fibers of such materials, it is considerably more difficult to form a shaped cross-section. *See, e.g.,* US 5,432,002 (Krämer) at Col. 1, lines 38 to 49 ("the production of a fine-fiber profiled feed yarn of ... Nylon 6,6 ... involves considerable difficulties ... [which] ...may be due to the fact that a round fiber cross section represents an ideal which is strayed from considerably in profile spinning."). Persons of skill knowing the difficulties of processing polyamides into finer dpf filaments would not have been disposed to consider Mills' teaching for carpet yarns when seeking to create fibers for yarns for wearing apparel.

For all of these reasons, the claim 1, and all claims depending from claim 1, patentably distinguish over Mills and Smith.

## **II. Rejection under 35 U.S.C. 103(a) – Mills and Smith and Abel**

Applicants respectfully traverse the rejection of claims 22 and 23 under 35 USC 103(a) as being unpatentable over Mills in view of Smith and further in view of Abel et al. (US 4,071,468). As stated above, claim 1 distinguishes from Mills and Smith, whether taken alone or combined. Claims 22 and 23 depend from claim 1 and thus are patentable for the same reasons claim 1 is patentable.

Abel does not fill the gaps in the disclosure of Mills and Smith regarding yarns with fine dpf fibers suitable for fabrics. The Examiner cites Abel only for the finishing treatment disclosure. Accordingly, claim 1 and all claims depending therefrom, should be allowed.

**CONCLUSION**

For at least the reasons stated above, claims 1 to 3, 5 to 7, 10 and 22 to 24 are believed to be in condition for allowance. Accordingly, Applicants respectfully request that the Application be allowed and passed to issue.

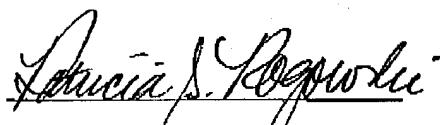
Enclosed is a petition for a one-month extension of time, along with a Fee Transmittal authorizing the Director to debit our Deposit Account No. 03-2775 in the amount of \$110 to cover the required fee under 37 CFR 1.17.

Enclosed also is an Authorization to Act in a Representative Capacity appointing the undersigned attorney to represent Applicants in this case.

Applicants believe no further fees are due. Nevertheless, should the Director determine that any other fees are due before the Examiner may consider this paper, such as a fee for a further extension of time, such extension is requested and the Director is authorized to debit our Deposit Account No. 03-2775 for the fee amount.

Date: October 13, 2004

Respectfully submitted,

By: 

Patricia Smink Rogowski  
Reg. No. 33, 791  
Connolly Bove Lodge & Hutz LLP  
P.O. Box 2207  
1007 N. Orange Street  
Wilmington, DE 19899  
(302) 658-9141

Attorneys for Applicant

**Enclosure:**

Petition for one-month extension  
Fee Transmittal authorizing charge to Deposit Account No. 03-2775  
Authorization to Act in a Representative Capacity

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To: Valerie Murphy	Date: 08-27-04	# of pages: 1
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Sample Form (08-04)

## AUTHORIZATION TO ACT IN A REPRESENTATIVE CAPACITY

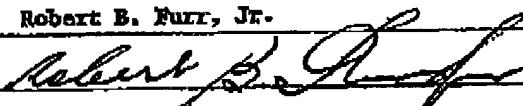
In re Application of: Richard T. Shoemaker, et al.	
Application No. 09/281,230	
Filed: June 14, 2001	
Title: Bilevel Cross-Section Fibers and Fabrics Prepared Therefrom	
Attorney Docket No. RD 8030 US MA	Art Unit: 1771

The practitioner named below is authorized to conduct interviews and has the authority to bind the principal concerned. Furthermore, the practitioner is authorized to file correspondence in the above-identified application pursuant to 37 CFR 1.34:

Name	Registration Number
Patricia Smink Rogowski	33,791

This is not a Power of Attorney to the above-named practitioner. Accordingly, the practitioner named above does not have authority to sign a request to change the correspondence address, a request for an express abandonment, a disclaimer, a power of attorney, or other document requiring the signature of the applicant, assignee of the entire interest or an attorney of record. If appropriate, a separate Power of Attorney to the above-named practitioner should be executed and filed in the United States Patent and Trademark Office.

## SIGNATURE of Practitioner of Record

Name	Robert B. Furr, Jr.
Signature	
Registration Number	32,985
Date	08-27-2004
Telephone	302-999-4342

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